

# New plans for 'negative air pressure'





Top left, negative air machines run in the west side of Wing 5. Above right, a Magnahelic gauge measures air pressure. In the coming weeks, each side of all floors will have these machines and gauges working inside an airlock buffer zone adjacent to occupied spaces.

During the Modernization Program Office Listening Session, held on June 26, 2007, a key concern voiced by attendees was the project's inability to establish and maintain negative air pressure throughout the construction zone. Achieving negative air pressure was also a key recommendation in the May 24, 2007, NIOSH report to DOI.

Negative air pressure refers to a pressure differential between occupied space and the construction zone. It is optimal to have air migrating from occupied space into the construction zone in order to inhibit dust, odors, and other possible irritants from migrating from the construction zone into occupied office space.

Previous efforts to establish negative air pressure fell short because windows in the construction zone were removed all at once, and the high-powered fans failed to draw enough air to create the differential

In an a attempt to resolve this issues, the modernization team recently built a mock-up of a secondary barrier to be installed behind the established barriers, to create a negative air space adjacent to occupied space.

This barrier will create a "negative air pressure zone" which will significantly reduce the opportunity for air migration between the occupied space and the construction zone.

Negative Pressure is only one step to increasing barrier protection, strict compliance to the Sheet Metal and Air Conditioning Contractors of North America (SMACNA) guidelines is the other.

The barriers will be built on both sides of the barrier on each floor of the construction zone in the coming weeks. Pressure gauges, supplied by GSA, will be mounted on each barrier on each floor, and will be checked by GSA daily.

This measure, along with others already in place, will substantially reduce odors, dust, and other indoor air quality concerns.

However, one significant challenge remains. The Mechanical Floor, located between Floors 5 and 6, is dedicated to housing HVAC, electrical, mechanical, and telecommunications equipment for the building. By its very nature, it contains numerous penetrations that allow these systems to service the building. These penetrations make the possibility of negative air pressure extremely challenging. A mechanical engineer has been asked to review and analyze the space configuration for possible solutions.

In the meantime, all construction activities on the M-Floor are being contained in the construction zone, and all doors have been sealed with two layers of polyurethane and taping. Strict compliance with SMACNA guidelines is being enforced in this area.

On the web: www.doi.gov/modernization | On the phone: 202.208.7283 Via e-mail: NBC\_MIB\_Modernization@nbc.gov | In person: Room 2505

## Beyond 'negative air': Measuring SMACNA compliance

Beginning in early July, the Modernization Program Office has been issuing and posting a notice called "Behind the Barricade: Plan of the Week."

This notice lists construction activities by floor and a percentage rate of compliance with the *SMACNA IAQ Guidelines for Occupied Buildings Under Construction.* While this is the first time a percentage was published, the checklist and corresponding inspections have been occurring regularly for a few weeks.

It must be noted that an industry standard for compliance with these guidelines does not exist. Therefore, the modernization team created a project-specific checklist with a weighted point system that would be used as an internal performance metric. From now on, 90% to 100% compliance will be coded "green", 80% to 89% compliance will be coded "yellow", and below 79% will be coded "red". The first week's percentage was 81%.

A key component of SMACNA compliance is achieving negative air pressure. However, there is a multitude of practices large and small that must be adhered to in order to reduce indoor air quality concerns.

GSA and its contractor have been working diligently to create negative air pressure (see article on page 1) as well as maintain effective environmental controls. The program expects the compliance percentage to increase and for indoor air quality concerns to be minimal in the near future.

The notice and score are posted at C and E Street entrances, in the cafeteria, and on the modernization website: www.doi.gov/modernization. Please contact the MPO if you would like hard copies.

90% +

**Green— On Track** 

80-89%

Yellow— Caution

**79%** -

**Red**— Alert

The percentage meanings

### STAFF UPDATES

The Modernization Program
Office will have a new program
manager reporting for duty in
mid-August. Additionally, a Deputy
Program Manager, an interdisciplinary
engineer, is being hired to assist with
adherence to contract specifications
and historical preservation obligations.
The office will also hire an industrial
hygienist and a safety manager in the
coming weeks under a proposed
realignment from facilities
management.

These new staff members will be working with Gay Bindocci, Sustainability Coordinator, and Junior Logan, Telecommunications Coordinator, with representing the department's interests as the project nears the half-way point for completion. We ask that you get to know the new staff as they arrive and help them to ensure that the department makes the most of this historic opportunity to build a better workplace.

Thanks to Ian Rosenblum, the building's industrial hygienist, who has accepted a promotional opportunity. Ian's efforts helped to maintain safety standards and to test and track the building's environmental state.

### **IAQ FORUM**

The Indoor Air Quality forum is open to all occupants of the Main Interior Complex and allows occupants to present indoor air quality issues and concerns related to the modernization.

The meeting is held every other Monday at 2 p.m. in Room 2507.

For more information, contact Sustainability Coordinator Gay Bindocci at 208-3919.

**NEXT IAQ FORUM** 

June 30 Room 2507 @ 2p.m.

#### **2007 TUG Schedule**

Bimonthly Tenant User Group meetings are held on Thursdays at 10 a.m. in the Rachel Carson Room.

September 27, 2007

#### MODERNIZATION NEWS



Published by the
Modernization Program Office
National Business Center
U.S. Department of the Interior 1849 C
Street NW
Washington DC 20240
Phone: 202 208-7283
nbc\_mib\_Modernization@nbc.gov
www.doi.gov/modernization/

**MPO Team Members** 

Department of the Interior Donald R. Swain: Acting Program Manager Gay Bindocci, LEED AP: Sustainability Junior Logan: Telecommunications Jeremy Lawson: OAA

General Services Administration Frank Palermo: Project Executive R.C. Vaughn: Project Manager Pradip Patel: Project Manager